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Claims

[c1] 1. A bicycle derailleur comprising:
a base member structured to be nonrotatably mounted to a bicycle frame;
a link mechanism having a first portion and a second portion, wherein the first portion of the link mechanism is coupled to the base member, and wherein the second portion of the link mechanism is disposed above the first portion of the link mechanism; and
a chain guide coupled to the second portion of the link mechanism so that the chain guide moves relative to the base member to move a chain among a plurality of sprockets.

[c2] 2. The derailleur according to claim 1 wherein the base member is structured to be mounted to the bicycle frame integrally with a wheel axle that supports a plurality of sprockets with which the derailleur cooperates.

[c3] 3. The derailleur according to claim 2 wherein the base member includes an opening for receiving the wheel axle therethrough.

[c4] 4. The derailleur according to claim 2 wherein the base

member includes a projection structured to engage the bicycle frame to nonrotatably fix the base member to the bicycle frame.

[c5] 5. The derailleur according to claim 4 wherein the projection is structured to engage a notch formed in the bicycle frame.

[c6] 6. The derailleur according to claim 5 wherein the projection is structured to engage an opening formed in the bicycle frame.

[c7] 7. The derailleur according to claim 6 wherein the projection is shaped to engage a slit formed in the bicycle frame.

[c8] 8. The derailleur according to claim 1 wherein the base member is structured to be mounted to the bicycle frame independently of a wheel axle that supports a plurality of sprockets with which the derailleur cooperates.

[c9] 9. The derailleur according to claim 8 wherein the base member includes a projection structured to engage the bicycle frame to nonrotatably fix the base member to the bicycle frame.

[c10] 10. The derailleur according to claim 9 wherein the projection is structured to engage a notch formed in the bi-

cycle frame.

[c11] 11. The derailleur according to claim 1 wherein the link mechanism comprises a four-point link mechanism.

[c12] 12. The derailleur according to claim 11 wherein the link mechanism comprises:
a first link member having a first end and a second end, wherein the first end of the first link member is rotatably coupled to the base member; and
a second link member having a first end and a second end, wherein the first end of the second link member is rotatably coupled to the base member.

[c13] 13. The derailleur according to claim 12 wherein the first end of the first link member is coupled to the base member through a first pivot shaft, wherein the first end of the second link member is coupled to the base member through a second pivot shaft, and wherein the first pivot shaft is substantially parallel to the second pivot shaft.

[c14] 14. The derailleur according to claim 13 wherein the chain guide is rotatably coupled to the second end of the first link member and to the second end of the second link member.

[c15] 15. The derailleur according to claim 14 further com-

prising:

a first biasing mechanism biasing the first link member and the second link member in a rotational direction; and

a cable retaining unit disposed on at least one of the first link member and the second link member for retaining the end of an operating cable.

[c16] 16. The derailleur according to claim 15 wherein the link mechanism forms a parallelogram in a plane perpendicular to the first and second pivot shafts such that, as the derailleur moves from the initial state toward the end of its range of motion, the parallelogram transforms into a rectangle and then back into a parallelogram.

[c17] 17. The derailleur according to claim 16 wherein the chain guide comprises:

a linking member linked to the second ends of the first and second link members;

a guide frame rotatably mounted to the linking member;

a pair of guide sprockets rotatably mounted within the guide frame; and

a second biasing mechanism biasing the guide frame relative to the linking member in a rotational direction.